

# Master of Science and Engineering Software Engineering

ENGLISH  
TAUGHT  
PROGRAM

Software Engineering goes beyond the technical aspects of computing to include experience, systems analysis, programming, maintenance and more into the design of software. Applications development encompasses all elements of the design chain of high-tech products in embedded systems middleware and infrastructures. The quantity of data to process is ever-growing and methods of collection, storage and analysis are constantly evolving. The aim of Junia ISEN's Software Engineering program is to **train IT engineers specialized in cutting-edge technology and facing the future of software engineering**, such as Big Data and Cloud Computing, with a comprehensive approach to design.

## active pedagogy

Our Software Engineering program is built on project-based learning, active teaching methods, and learning-by-doing. This hands-on approach gives students real world experience and, with our piecemeal curriculum, the power to decide how to build their own expertise.

## LEARNING BY DOING

- Teaching and group projects supervised by professionals
- Hackathons and coding challenges
- Innovation learning centers and Fab Lab
- Flipped classrooms and serious games
- Co-design labs with partner schools

## projects

Semester-long team projects are an integral part of the curriculum. One day per week is dedicated to group projects in collaboration with a professional expert, partner company, or research institute and supervised by a Junia ISEN faculty member.

## EXAMPLES OF PROJECTS

- Design and creation of an automated network for a cybersecurity bench
- Linux container accessible remotely
- Post-quantum cryptographic libraries

## internships

Students spend 40% of the program immersed in real professional experience. These internships, carried out either in France or abroad, in a company or research center, expose students to the current reality of working and prepare them for entry into the global workforce.

## EXAMPLES OF INTERNSHIPS

- Php developer
- Front-end developer
- Study and development of a strategic project using agile methodology

## career prospects

The latest technological devices need well-built software to function. Optimizing not only the creation but use and maintenance of software is essential to creating a sustainable system of reliable processes. Understanding how to engineer software with a holistic approach is a vital skill for a variety of technological applications. Some career prospects in Software Engineering include applications designer, website developer, IT solutions integrator, test engineer, systems and network architect, IT project leader, director of information systems, facilities engineer, network operations engineer, web architect, multimedia developer, and more.

In addition to exceptional technical knowledge and managerial skills, Junia ISEN graduates are prepared for the reality of the professional world even before they get their diploma, which is why 100% of Junia ISEN alumni are employed within 6 months of graduating. Junia's more than 11,000 alumni around the world work for some of the biggest names in electronics and digital technology or join and create their own startups thanks to the entrepreneurial mindset cultivated at Junia.

## practical information

### admission requirements

- Bachelor's degree in Digital and Information Technology, IT Engineering or any related fields
- English B2 level certified by an official test (IELTS 6.0, TOEIC 785, TOEFL IBT 80)
- Knowledge of French language is recommended, but not required for admission

### application procedure

To apply, visit [junia.force.com](http://junia.force.com) and:

- Fill out the online application form
- Upload supporting documents
- Attend individual interview (in-person or video conference)
- Application and all required materials must be submitted before **May 15, 2022**

Need help : [admission.international@junia.com](mailto:admission.international@junia.com)

### financial aspects

#### Fees and other expenses

- 2022-2023 Tuition Fees:
  - Non-EU students: €10,600 (Year 1)
  - EU students: €9,000 (Year 1)
- Living expenses in France: approx. €650/month
- Miscellaneous fees (insurance, visa...): approx. €500/year

#### Scholarships and Financial Aid

- Scholarships Available: contact your local French embassy or Campus France office
- Paid internships if carried out in France: min. €555/month
- French government housing allowance: approx. 90€/month

## MASTER 1

		ECTS
Fall Semester	Network & System Base	3
	Java 1	3
	Operating Systems	3
	Web Technologies	3
	Python	3
	French as a Foreign Language	3
	Technical Project	7
Spring Semester	Artificial Intelligence	3
	Java 2	3
	Data Base	3
	Android	3
	Electives (choose two):	
	UNIX	2
	Quantum Computing	2
	Network Programming	2
Humanities and Management	5	
Technical Project	7	
Summer Internship	Three-month Internship	10

## MASTER 2

		ECTS
Fall Semester	Cloud Computing & Architecture	3
	JEE	3
	IT Risk & Management	3
	Object-Oriented Design	3
	Urbanization of IT Services	2
	Humanities & Management	5
	French as a Foreign Language	2
	Innovation Project	9
Spring Semester	Six-month Internship	30

Course details are subject to change, please visit <https://www.junia.com/en/our-degree-programmes/> for the latest information

## international student services

### Dedicated support just for you

- Reservation of accommodation in a student residence
- Administrative procedures (visa, resident permit, etc.)
- Integration into student life (associations, activities, etc.)
- Welcome Session: intensive French language course, intercultural communication, orientation week, social events, and more

**JUNIA** Graduate school  
of science  
and engineering  
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